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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,817	09/07/2005	Holger Klapproth	JST-03U1	2401
59538 7590 08/03/2009 BIOTECH BEACH LAW GROUP, PC 625 BROADWAY Suite 1210 SAN DIEGO, CA 92101				
EXAMINER YU, MELANIE J				
ART UNIT		PAPER NUMBER		
1641				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/521,817

**Applicant(s)**

KLAPPROTH, HOLGER

**Examiner**

MELANIE YU

**Art Unit**

1641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 April 2009.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 49-82 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 79-82 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SF/08)  
Paper No(s)/Mail Date 6/8  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Applicant's amendment filed 22 April 2009 has been entered.

#### ***Status of the Claims***

2. Claims 1-78 and 83-91 are canceled. Claims 79-82 are currently pending and are examined on the merits.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 79, 80 and 82 are rejected under 35 U.S.C. 102(e) as being anticipated by Cohen et al. (US 2003/0207258) in view of Pomato et al. (US 5,965,106) further in view of Clapper (US 5,744,515) and in light of Kamb et al. (US 2003/0027214).

Cohen et al. teach a blocking reagent and at least one photoreactive group (crosslinking reagent has a reactive group that attaches to a blocking material, par. 32; substrate has immobilized reactive group is photoreactive, pars. 30 and 52; blocking

reagent is attached to crosslinking reagent after activation of the photoreactive group, par. 52). Cohen et al. teach a photo-reactive crosslinking agent of SANPAH, but do not specifically teach that the attachment between the substrate and the photoactive agent is covalent. However, Kamb et al. teach a covalent bond formed between a photoreactive SANPAH and a substrate when SANPAH is photoactivated (par. 115). Cohen et al. fail to teach the blocking reagent having the photoreactive group for covalent immobilization on a surface and the photoreactive group being benzophenone.

Pomato et al. teach a photoreactive benzophenone being advantageous over a photoreactive group of arylazide reagents (col. 14, lines 37-40), wherein SANPAH is an arylazide reagent (col. 17, lines 47-61), in order to provide an in vivo delivery system that is easily synthesized and purified and high yields.

Clapper teaches a molecule having a photoreactive group (molecule derivatized with photoreactive group, col. 13, lines 16-20), wherein the photoreactive group is benzophenone (col. 11, lines 40-61) and activating the photoreactive group to covalently immobilize the molecule to a substrate (proteins are illuminated to activate the photoreactive group to produce covalent immobilization to the substrate, col. 13, lines 22-24), in order to provide covalently immobilization of the molecule to the substrate.

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include as the photoreactive group of Cohen et al. in light of Kamb et al., benzophenone instead of SANPAH which is an arylazide reagent as taught by Pomato et al., in order to provide a higher crosslinking yield. It would have

further been obvious to one having ordinary skill in the art at the time the invention was made to include on the blocking reagent, instead of on the substrate of Cohen et al. in view of Pomato et al. and in light of Kamb et al., a photoreactive group for covalent immobilization on a surface as taught by Clapper, in order to provide immobilized molecules that are covalently bonded to a substrate and have effective activity after immobilization.

Cohen et al. teach the blocking reagent being bovine serum albumin or a surfactant (par. 39).

4. Claim 81 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen et al. (US 2003/0207258) in view of Pomato et al. (US 5,965,106) further in view of Clapper (US 5,744,515) and in light of Kamb et al. (US 2003/0027214), as applied to claim 80, further in view of Caldwell et al. (US 5,516,703).

Cohen et al. in view of Pomato et al. further in view of Clapper and in light of Kamb et al. teach a pluronic surfactant blocking reagent (Cohen, par. 39), but fail to teach the surfactant specifically being PLURONIC F-68.

Caldwell et al. teach modified pluronic surfactants immobilized to a substrate (col. 9, lines 18-47), wherein the pluronic surfactant is Pluronic F-68 (col. 10, lines 21-40), in order to provide a surface with minimum non-specific binding (col. 3, lines 43-51).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include as the pluronic blocking reagent of Cohen et al. in view of Pomato et al. further in view of Clapper and in light of Kamb et al., a

surfactant that is Pluronic F-68 as taught by Caldwell et al. because Cohen et al. is generic with respect to the type of Pluronic surfactant that can be incorporated into the assay device and one would be motivated to use a specific type of Pluronic surfactant based on the economics and availability of reagents.

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 76-82 have been fully considered and are persuasive, but are moot in view of the new ground(s) of rejection. The previous rejections of the claims have been withdrawn because Cohen et al. teach a photoreactive group that is already photoactivated when attached to the blocking reagent, and therefore is not considered photoreactive. However, upon further consideration, a new ground(s) of rejection is made in view of Clapper teaching a molecule attached to a photoreactive group and immobilized to a substrate by a covalent bond between the photoreactive group and the substrate.

### ***Conclusion***

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELANIE YU whose telephone number is (571)272-2933. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Shibuya can be reached on (571) 272-0806. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Melanie Yu/  
Patent Examiner, Art Unit 1641